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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,914	05/19/2006	Akira Otani	P29987	8957
7055 7590 04/14/2009 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER KRUPICKA, ADAM C				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
04/14/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

# Office Action Summary

**Application No.**

10/595,914

**Applicant(s)**

OTANI ET AL.

**Examiner**

Adam C. Krupicka

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2 and 7 is/are pending in the application.
- 4a) Of the above claim(s) 3-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS-100)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 08/21/2008

**DETAILED ACTION*****Election/Restrictions***

Applicant's election with traverse of Group I, claims 1, 2 and 7, in the reply filed on March 25, 2009 is acknowledged. The traversal is on the ground(s) that all groups share the anisotropic adhesive sheet of group I as the special technical feature. The examiner notes that upon reconsideration claim 6 is heretofore grouped with group III. However the requirement for restriction between group I (as elected), group II (claims 3 and 4) and group III (claims 5, 6 and 8) is maintained. The examiner considers an adhesive layer wherein 90% or more of the conductive particles are in a region of thickness not greater than 1.5 times the average particle size, to be a special technical feature that is not shared with the inventions of groups II and III. Additionally, the fine conducting terminals of the invention of group III are a special technical feature that is not shared with the invention of group I.

Further, in the invention of group II is considered to have a special technical feature of conducting particles having a size between 1 and 8 $\mu$ m which is not shared with the invention of group III. Further, group III requires fine conducting terminals which are considered to be special technical features and are not shared with the invention of group II. For these reasons the requirement for restriction is deemed proper and is therefore made FINAL.

***Information Disclosure Statement***

The information disclosure statement filed August 21, 2006 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered. More specifically applicant has failed to provide English abstracts or explanation the relevance for JP 2002-519473, JP 2-895872, JP 2-117980, JP 3-165477. Further applicant has indicated English abstracts of JP 2895872 and JP 3165477, neither of which appears in the application file.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 2 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Connell *et al.* (PGPub US 2001/0008169 A1) as evidenced by Kropp *et al.* (US Pat. 5,362,421).

**Regarding applicants' claims 1 and 2**, Connell *et al.* teach an anisotropic adhesive layer comprising an adhesive composition such as that taught by Kropp *et al.* (paragraph 0038). The adhesive composition of Kropp *et al.* comprises an initiator

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(*considered to be a curing agent*) and a curable thermoplastic resin (*abstract and col. 2 lines 20-46*).

Connell *et al.* also teach conductive Ni or Ni-coated metal particles (*paragraph 0036*) that are in the same region of thickness within the adhesive layer. This is because the particles are placed into dimples all of about the same depth which corresponds to the average particle size (*paragraph 0046*). When the adhesive is coated thereon it does not penetrate deeper than the dimples forming an adhesive layer on which the conductive particles exist within no more than the depth of an average particle (*paragraph 0050*). Therefore the maximum thickness range the particles can occupy is one particle or 1.0 times the average particle size within the thickness of the adhesive layer.

Further 99.2% of the particles of Connell *et al.* are considered not to contact other particles based on *figure 6(c)* which shows a micrograph of dimples in a single particle embodiment. The micrograph shows 475 dimples, 4 of which contain two particles, or 99.2% contain one particle. Further the example associated with *figure 6(c)* discloses an average particle size of 4.9 $\mu$ m, and a spacing of 15 $\mu$ m or approximately three times the particle thickness.

Connell *et al.* do not appear to teach a total adhesive layer thickness. However, one of ordinary skill in the art at the time of the invention would have found it obvious to optimize the thickness of the adhesive layer to achieve the ideal adhesive force for an intended use without using too much adhesive as to unnecessarily increase production costs or too much adhesive as to make the layer so thick as to prevent particles from properly contacting opposing electrodes when used in a manner as suggested in *figure*

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5(c). Yet enough adhesive must be applied to hold the particles and to sufficiently adhere articles during an indented use.

**Regarding applicants' claim 7**, Connell *et al.* teach an anisotropic adhesive sheet as shown above. Regarding the limitation that the film is formed by the process of claim 3, via the bi-axial stretching of a film, it is noted that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process", *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Further, "the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product", *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 298, 292 (Fed Cir. 1983). See MPEP 2113.

Therefore, absent evidence of criticality regarding the presently claimed process and given that the anisotropic adhesive sheet meets the requirements of the claimed composition, the anisotropic adhesive sheet of Connell *et al.* clearly meets the requirements of the present claim.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam C. Krupicka whose telephone number is (571)270-7086. The examiner can normally be reached on Monday - Thursday 7:30am to 5:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Adam C Krupicka/  
Examiner, Art Unit 1794

/JENNIFER MCNEIL/  
Supervisory Patent Examiner, Art Unit 1794